QUIZ NAVIGATION

Rose Wang

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Started on	Friday, 11 October 2024, 4:22 AM
State	Finished
Completed on	Friday, 11 October 2024, 4:34 AM
Time taken	12 mins 29 secs
Marks	5.0/10.0
Grade	**50.0** out of 100.0

Question 1

ID: 50115

Correct

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A 28-year-old male patient, LM, is brought into your clinic by his sister. She notes he has had a persistently elevated mood and increased energy for the past week. The patient reports feeling highly expressive and admits to engaging in risky behaviours such as excessive spending. You notice he demonstrates rapid speech when speaking to you and he admits a decreased need for sleep. You review his file and note he has a history of Bipolar Type 1 and has not filled his lithium prescription for a few months.

What type of episode is this patient most likely experiencing?

Select one:

a. Hypomanic episode ✖

b. Major depressive episode ✖

c. Manic episode ✔

Rose Wang (ID:113212) this answer is correct. LM is experiencing mania as he has increased speech, decreased need for sleep, excessive spending, and his symptoms have occurred for at least 1 week.

d. Mixed episode ✖

Correct

Marks for this submission: 1.0/1.0.

TOPIC: Bipolar Disorders

LEARNING OBJECTIVE:

To learn the clinical presentation of the episodes featured in bipolar disorder.

BACKGROUND:

Bipolar Disorder (BD) is a lifelong and cyclical condition that presents as recurring changes in the patient's mood, behaviour, and energy, and is often characterized by a combination of manic, hypomanic, and depressive episodes. If unrecognized and left untreated, BD can result in significant functional impairment, and is associated with an increased risk of hospitalizations and suicide attempts. The disorder is further classified into various subtypes, including Bipolar 1, Bipolar 2 and other subtypes. The following table will review the types of BD episodes and their features:

Type of Episode	Definition as per the Diagnostic and Statistical Manual of Mental Disorders 5th Edition (DSM-5)
Manic episode	Abnormally/persistently elevated mood and energy for ≥1 week + significant impairment to social and occupational functioning (may require hospitalization). Mood is often expansive (highly expressive) or irritable + associated with ≥3 of the following symptoms (≥4 if mood is only irritable): • Inflated self-esteem (grandiosity) • Increased talking • Less need for sleep • Racing thoughts • Distractibility (poor attention) • Increased goal-directed activity • Excessive involvement in pleasurable activities with potentially serious consequences (e.g., buying sprees, unsafe sex practices, and poor judgement in business activities) Patients will likely present with psychotic features such as: • Delusions • Hallucination
Hypomanic episode	Similar to manic but symptoms occurring ≥4 days + symptoms not severe enough to significantly impair functioning + no presence of psychotic symptoms (presence of psychosis can suggest mania)

Major depressive episode	Depressed mood and/or significant loss of interest/pleasure (anhedonia) in normal activities for ≥ 2 weeks, with ≥ 4 of the following symptoms: • Insomnia or hypersomnia • Significant weight gain/loss or altered appetite • Decreased energy/fatigue • Observable psychomotor retardation/agitation (slower or agitated thought processes or movements) • Excessive guilt or worthlessness • Impaired concentration/indecisiveness • Recurring thoughts of death • Suicidal attempts/plan

RATIONALE:

Correct Answer:

- **LM is experiencing mania** - LM has increased speech, decreased need for sleep, excessive spending, and his symptoms have occurred for at least 1 week.

Incorrect Answers:

- **LM is experiencing hypomania** - While some symptoms of LM's presentation may overlap with hypomania, the severity and duration of symptoms (at least 1 week) suggest a manic episode.
- **LM is experiencing a major depressive episode** - LM is showing signs of an elevated mood, not a depressed one.
- **LM is experiencing a mixed episode** - A mixed episode involves symptoms of both mania and depression, which LM is not experiencing.

TAKEAWAY/KEY POINTS:

Patients experiencing manic episodes experience elevations in mood and energy, while those with major depressive episodes have a marked decrease in mood. Both manic and major depressive episodes can cause sleep disturbances. Patients with manic episodes may have a decreased need for sleep, while those with major depressive episodes may have insomnia or hypersomnia (excessive drowsiness).

REFERENCES:

[1] Parikh SV. Bipolar Disorder. In: Compendium of Therapeutic Choices. Canadian Pharmacists Association.
[2] Yatham LN, Chakrabarty T, Bond DJ, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorders (ISBD) recommendations for the management of patients with bipolar disorder with mixed presentations. Bipolar Disord. 2021;23(8):767-788. doi:10.1111/bdi.13135

The correct answer is: Manic episode

Question 2

ID: 42106

Incorrect

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SP, a 34-year-old woman, has been recently diagnosed with bipolar disorder after experiencing periods of intense mood swings, ranging from euphoric highs to debilitating lows. As her pharmacist, you want to ensure she is engaged in her treatment decisions so are discussing various antipsychotic medications as part of her treatment plan.

Which of the following statements is **FALSE** regarding the role of antipsychotics in the treatment of bipolar disorder?

Select one:

a. Lurasidone is considered a first-line agent in the treatment of acute depression ✖

Rose Wang (ID:113212) this answer is incorrect. Lurasidone is considered a first-line option in the treatment of acute depression in bipolar disorder.

b. Quetiapine is considered a first-line agent in acute mania, acute depression, and maintenance therapy ✖

c. Risperidone taken orally is considered a first-line agent in the maintenance phase of bipolar disorder ✔

d. Olanzapine is considered a second-line agent in the treatment of acute mania ✖

Incorrect

Marks for this submission: 0.0/1.0.

TOPIC: Bipolar Disorder

LEARNING OBJECTIVE:

To learn the role of antipsychotics in the treatment of bipolar disorder.

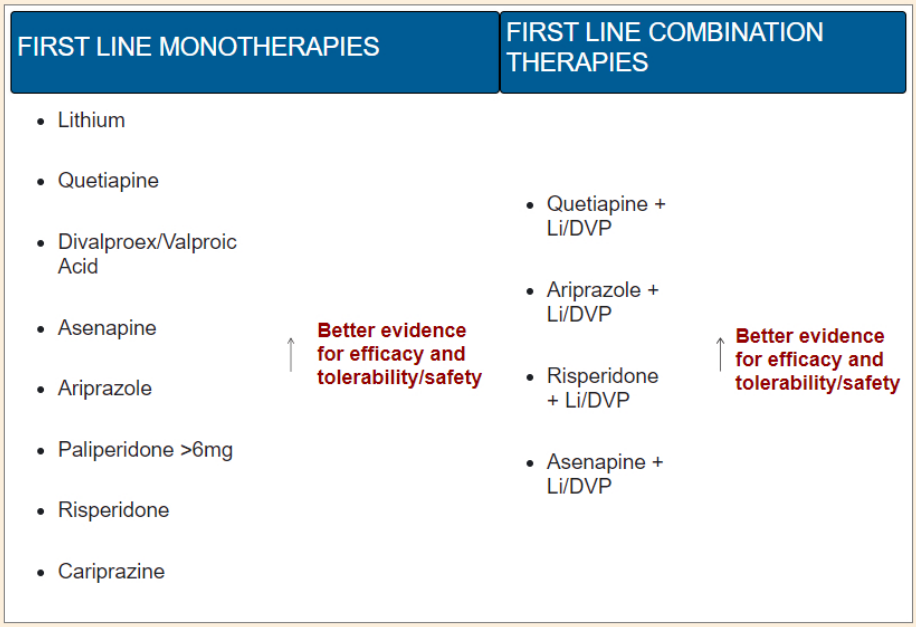
BACKGROUND:

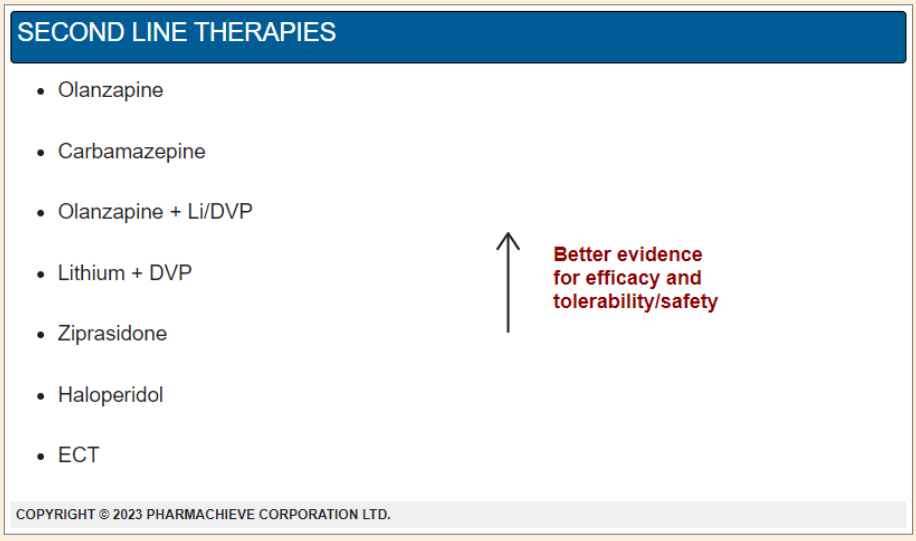
Pharmacological treatments for each phase are determined by their level of evidence in treating the specified phase, as well as some other factors including but not limited to side effects, tolerability, drug interactions, and comorbid conditions. The mainstay treatments for bipolar disorder include lithium, valproic acid/divalproex, and Second-Generation Antipsychotics (SGAs). Combination therapy typically consists of a SGA and either lithium or divalproex. It is important to remember that those in manic or depressive states may have mixed features. In these cases, it is important to consider the recommended treatment options for the predominant episode.

Manic Episodes

Both monotherapy and combination therapy are first-line options for acute mania, depending on the patient. About 50% of patients respond to monotherapy and about 70% respond to combination therapy. However combination therapy is associated with more side effects compared to monotherapy. As a result, combination therapy is generally reserved for patients who require a quicker response, have more severe symptoms, have had a partial or no response to monotherapy, and who will likely tolerate combination therapy (based on their previous response to BD treatments, and age).

Improvement in mania usually occurs within 1-2 weeks. If a therapeutic response is not seen after 2 weeks, assess patients for external factors such as adherence and possible substance use and optimize dosing if possible. If drug therapy has already been optimized, a switch to a different first-line agent is warranted (especially if there was no response to the initial agent). If the disease is particularly severe, if the initial agent was well-tolerated and provided some benefit, add-on of a second agent can also be considered. An additional 2 weeks should be given to monitor the effects of these changes. Second- and third-line therapies should only be tried if all previous options have been tried or ruled out. If a therapeutic improvement is seen, continue on the current regimen for at least 2 months, until the patient enters the maintenance phase. The 2018 CANMAT treatment recommendations for acute mania in bipolar disorder are outlined below:



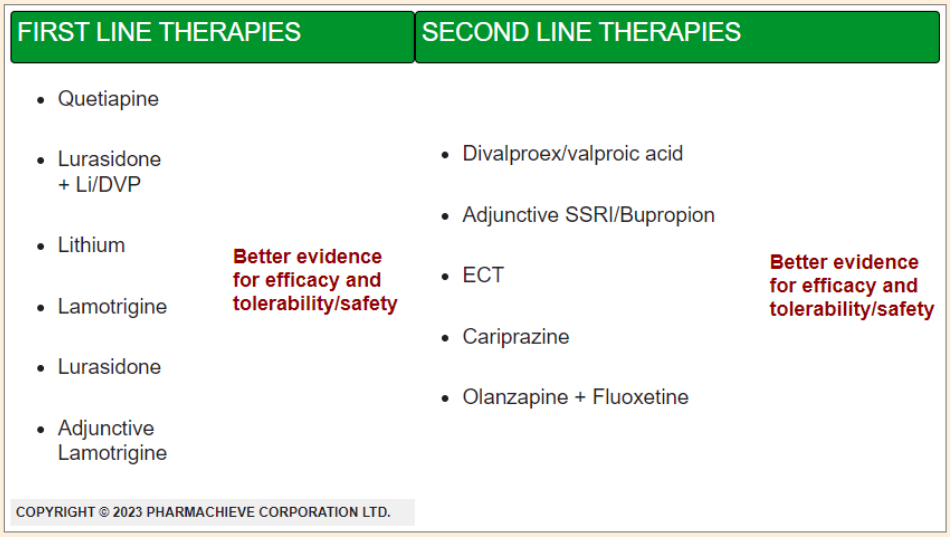


Depressive Episodes

Similar to treating manic episodes, most first-line and second-line regimens have comparable efficacy in treating acute bipolar depression. Thus, evidence in the maintenance phase, in treating acute manic episodes, as well as safety and tolerability are used to determine treatment hierarchy.

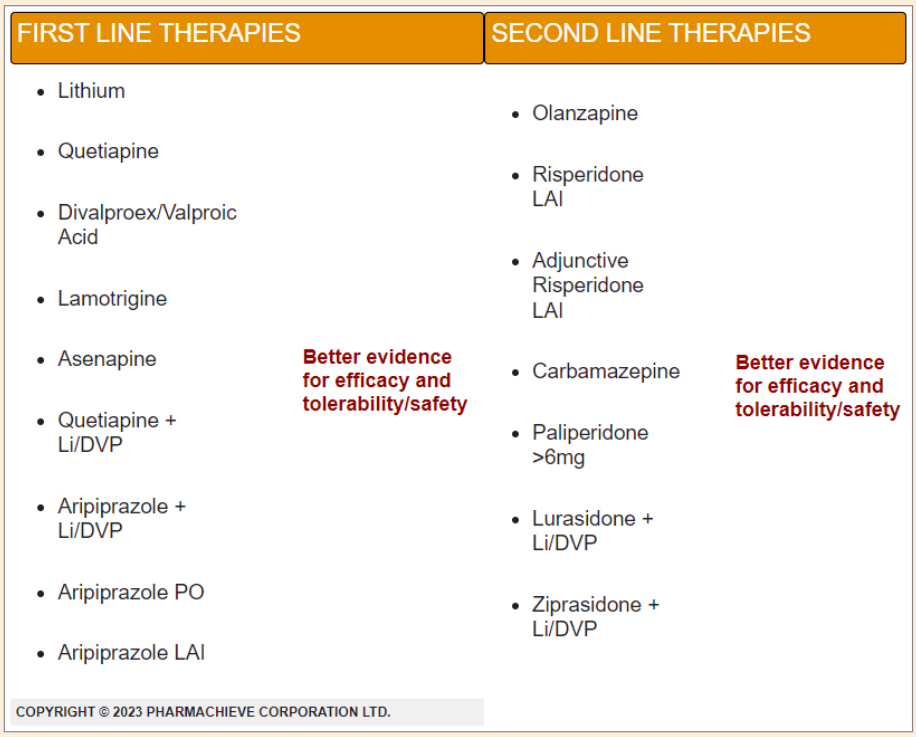
Although difficult to treat, drug response in bipolar depression is expected within 2-4 weeks. If a response is not seen after this time, consider assessing patients for external factors such as adherence and possible substance use and optimizing drug therapy. If these have already been optimized, a switch to a different first-line agent or adding a new agent is warranted. An additional 2-4 weeks should be given to monitor the response to these changes. Second- and third-line therapies should only be tried if all previous options have been tried or ruled out. If therapeutic improvement is seen, continue on the current regimen for at least 2 months, until the patient enters the maintenance phase. The 2018 CANMAT treatment recommendations for

acute depression in bipolar disorder are outlined below:



Maintenance Therapy

As stated previously, patients are considered to be in maintenance after experiencing minimal to no symptoms on therapy for at least 2 months. Without therapy, 23-40% of patients will experience a recurrent BD episode within 1 year. Maintenance therapy reduces this to 19-25%, reduces residual symptoms following acute episodes, and restores daily functioning. Maintenance therapy for BD is generally lifelong. The 2018 CANMAT treatment recommendations for maintenance therapy are outlined below:



RATIONALE:

Correct Answer:

(Choice #3): Long-acting risperidone injections are considered second-line options for maintenance therapy in bipolar disorder.

Incorrect Answers:

(Choice #1): Lurasidone (either monotherapy or in combination with lithium or divalproex) is considered a first-line option in the treatment of acute depression in bipolar disorder.

(Choice #2): Quetiapine is a first-line option in the treatment of acute mania, acute depression, and maintenance phases of bipolar disorder.

(Choice #4): Olanzapine is a second-line option in the treatment of acute mania in bipolar disorder.

TAKEAWAY/KEY POINTS:

Various antipsychotics have been studied in the treatment of bipolar disorder. In acute mania, oral risperidone may be considered as a first-line option. During the maintenance phase of bipolar disorder, long-acting risperidone injections are considered a second-line option.

REFERENCES:

[1] Yatham LN, Chakrabarty T, Bond DJ, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT)

and International Society for Bipolar Disorders (ISBD) recommendations for the management of patients with bipolar disorder with mixed presentations. *Bipolar Disord*. 2021;23(8):767-788. doi:10.1111/bdi.13135

[2] Parikh SV. Bipolar Disorder. In: Compendium of Therapeutic Choices. Canadian Pharmacists Association.

The correct answer is: Risperidone taken orally is considered a first-line agent in the maintenance phase of bipolar disorder

Question 3

ID: 42107

Correct

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THE NEXT 2 QUESTIONS INCLUSIVE REFER TO THE FOLLOWING CASE:

CB is a 42-year-old male who has recently moved from out of town. He approaches your clinic as a new patient with a prescription for lamotrigine. After some questioning, you determine that he has a history of bipolar disorder, and has tried a handful of other medications in the past with no success. CB is confused because he read online that lamotrigine is used to treat seizures, and he has never had a seizure before.

Which of the following statements accurately describes the role of lamotrigine in the treatment of bipolar disorder?

Select one:

a. Lamotrigine is considered a first-line option for major depressive episodes in those with bipolar disorder ✔

Rose Wang (ID:113212) this answer is correct. Lamotrigine is considered a first-line agent in the treatment of bipolar depression. It is also a first-line agent for maintenance therapy in bipolar disorder.

b. Lamotrigine is considered a first-line option for acute manic episodes in those with bipolar disorder ✖

c. Lamotrigine is considered a second-line option for maintenance therapy in those with bipolar disorder ✖

d. Lamotrigine is considered a second-line option for major depressive episodes in those with bipolar disorder ✖

Correct

Marks for this submission: 1.0/1.0.

TOPIC: Bipolar Disorder

LEARNING OBJECTIVE:

To learn the role of antipsychotics in the treatment of bipolar disorder.

BACKGROUND:

Pharmacological treatments for each phase are determined by their level of evidence in treating the specified phase, as well as some other factors including but not limited to side effects, tolerability, drug interactions, and comorbid conditions. The mainstay treatments for bipolar disorder include lithium, valproic acid/divalproex, and Second-Generation Antipsychotics (SGAs). Combination therapy typically consists of a SGA and either lithium or divalproex. It is important to remember that those in manic or depressive states may have mixed features. In these cases, it is important to consider the recommended treatment options for the predominant episode.

Manic Episodes

Both monotherapy and combination therapy are first-line options for acute mania, depending on the patient. About 50% of patients respond to monotherapy and about 70% respond to combination therapy. However combination therapy is associated with more side effects compared to monotherapy. As a result, combination therapy is generally reserved for patients who require a quicker response, have more severe symptoms, have had a partial or no response to monotherapy, and who will likely tolerate combination therapy (based on their previous response to BD treatments, and age).

Improvement in mania usually occurs within 1-2 weeks. If a therapeutic response is not seen after 2 weeks, assess patients for external factors such as adherence and possible substance use and optimize dosing if possible. If drug therapy has already been optimized, a switch to a different first-line agent is warranted (especially if there was no response to the initial agent). If the disease is particularly severe, if the initial agent was well-tolerated and provided some benefit, add-on of a second agent can also be considered. An additional 2 weeks should be given to monitor the effects of these changes. Second- and third-line therapies should only be tried if all previous options have been tried or ruled out. If a therapeutic improvement is seen, continue on the current regimen for at least 2 months, until the patient enters the maintenance phase. The 2018 CANMAT treatment recommendations for acute mania in bipolar disorder are outlined below:

FIRST LINE MONOTHERAPIES		FIRST LINE COMBINATION THERAPIES	
• Lithium • Quetiapine • Divalproex/Valproic Acid • Asenapine • Aripiprazole	↑ Better evidence for efficacy and tolerability/safety	• Quetiapine + Li/DVP • Aripiprazole + Li/DVP • Risperidone +	↑ Better evidence for efficacy and tolerability/safety

- Paliperidone >6mg
- Risperidone
- Cariprazine

- Asenapine + Li/DVP

SECOND LINE THERAPIES
• Olanzapine • Carbamazepine • Olanzapine + Li/DVP • Lithium + DVP • Ziprasidone • Haloperidol • ECT

Better evidence for efficacy and tolerability/safety

Depressive Episodes

Similar to treating manic episodes, most first-line and second-line regimens have comparable efficacy in treating acute bipolar depression. Thus, evidence in the maintenance phase, in treating acute manic episodes, as well as safety and tolerability are used to determine treatment hierarchy.

Although difficult to treat, drug response in bipolar depression is expected within 2-4 weeks. If a response is not seen after this time, consider assessing patients for external factors such as adherence and possible substance use and optimizing drug therapy. If these have already been optimized, a switch to a different first-line agent or adding a new agent is warranted. An additional 2-4 weeks should be given to monitor the response to these changes. Second- and third-line therapies should only be tried if all previous options have been tried or ruled out. If therapeutic improvement is seen, continue on the current regimen for at least 2 months, until the patient enters the maintenance phase. The 2018 CANMAT treatment recommendations for acute depression in bipolar disorder are outlined below:

FIRST LINE THERAPIES	SECOND LINE THERAPIES
• Quetiapine • Lurasidone + Li/DVP • Lithium • Lamotrigine • Lurasidone • Adjunctive Lamotrigine	• Divalproex/valproic acid • Adjunctive SSRI/Bupropion • ECT • Cariprazine • Olanzapine + Fluoxetine

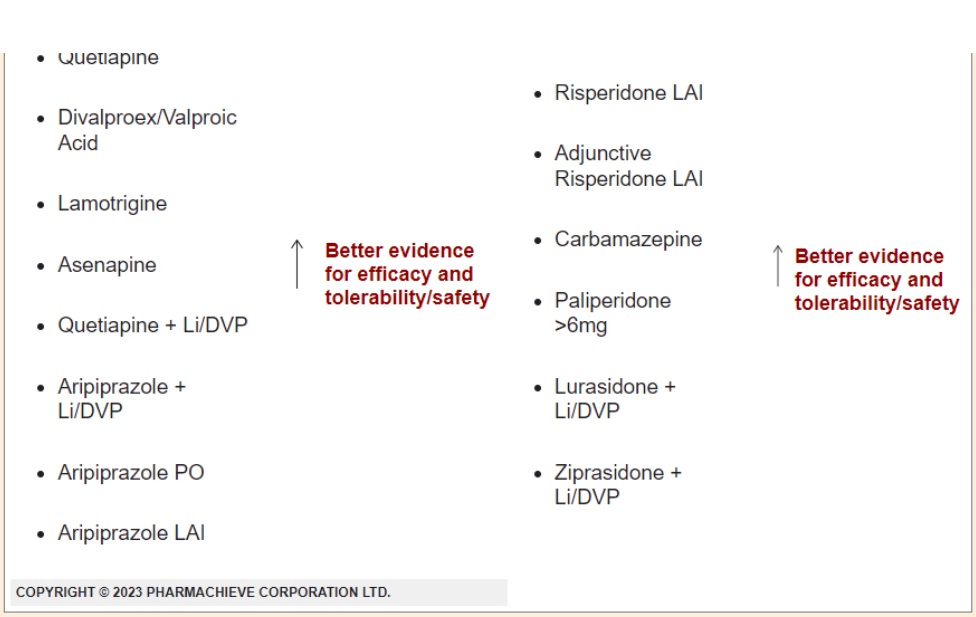
Better evidence for efficacy and tolerability/safety

Better evidence for efficacy and tolerability/safety

Maintenance Therapy

As stated previously, patients are considered to be in maintenance after experiencing minimal to no symptoms on therapy for at least 2 months. Without therapy, 23-40% of patients will experience a recurrent BD episode within 1 year. Maintenance therapy reduces this to 19-25%, reduces residual symptoms following acute episodes, and restores daily functioning. Maintenance therapy for BD is generally lifelong. The 2018 CANMAT treatment recommendations for maintenance therapy are outlined below:

FIRST LINE THERAPIES	SECOND LINE THERAPIES
• Lithium	• Olanzapine



Lamotrigine is an appropriate first-line agent in the treatment of bipolar depression, and as maintenance therapy, although it is not effective in the manic phase. Lamotrigine has been associated with dermatological toxicity (i.e. serious skin rashes), including Stevens-Johnson Syndrome (SJS) and Toxic Epidermal Necrolysis (TEN). The risk of lamotrigine-associated rash is highest during initiation, thus lamotrigine should be titrated slowly.

RATIONALE:

Correct Answer:

(Choice #1): Lamotrigine is considered a first-line agent in the treatment of bipolar depression. It is also a first-line agent for maintenance therapy in bipolar disorder.

Incorrect Answers:

(Choice #2): Existing guidance does not recommend the use of lamotrigine to treat acute mania in patients with bipolar disorder.

(Choice #3): Lamotrigine is considered a first-line agent for maintenance therapy in bipolar disorder.

(Choice #4): Lamotrigine is considered a first-line agent in the treatment of bipolar depression. It is also a first-line agent for maintenance therapy in bipolar disorder.

TAKEAWAY/KEY POINTS:

Lamotrigine is an appropriate first-line agent in the treatment of bipolar depression, and as maintenance therapy. It is not effective in the manic phase of bipolar disorder.

REFERENCES:

[1] Yatham LN, Chakrabarty T, Bond DJ, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorders (ISBD) recommendations for the management of patients with bipolar disorder with mixed presentations. *Bipolar Disord*. 2021;23(8):767-788. doi:10.1111/bdi.13135

[2] Parikh SV. Bipolar Disorder. In: Compendium of Therapeutic Choices. Canadian Pharmacists Association.

[3] Lamotrigine Product Monograph; https://pdf.hres.ca/dpd_pm/00064120.PDF

The correct answer is: Lamotrigine is considered a first-line option for major depressive episodes in those with bipolar disorder

Question 4

ID: 50116

Incorrect

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Which of the following adverse effects is the most likely to occur in patients taking lamotrigine?

Select one:

a. Hypercalcemia ✖

b. Hypoglycemia ✖

c. Nausea ✔

d. QT interval prolongation ✖

Rose Wang (ID:113212) this answer is incorrect. Lamotrigine is not known to cause QT interval prolongation.

Incorrect

Marks for this submission: 0.0/1.0.

TOPIC: Bipolar Disorder

LEARNING OBJECTIVE:

To learn the adverse effects associated with lamotrigine therapy.

BACKGROUND:

Lamotrigine is an appropriate first-line agent in the treatment of bipolar depression, and as maintenance

Lamotrigine is an appropriate first-line agent in the treatment of bipolar depression, and as maintenance therapy. However, it is not effective in the manic phase of bipolar disorder. Lamotrigine has been associated with dermatological toxicity (i.e. serious skin rashes), including Stevens-Johnson Syndrome (SJS) and Toxic Epidermal Necrolysis (TEN). The risk of lamotrigine-associated rash is highest during initiation, thus lamotrigine should be titrated slowly. In addition to skin rash, other commonly reported side effects of lamotrigine include nausea, dyspepsia, vomiting, dizziness, drowsiness, and insomnia.

RATIONALE:

Correct Answer:

- **Nausea** - Nausea is a commonly reported side effect of lamotrigine.

Incorrect Answers:

- **Hypercalcemia** - Hypercalcemia is not a reported side effect of lamotrigine.
- **Hypoglycemia** - Hypoglycemia is not a reported side effect of lamotrigine.
- **QT interval prolongation** - Lamotrigine is not known to cause QT interval prolongation.

TAKEAWAY/KEY POINTS:

Common adverse effects associated with lamotrigine therapy include nausea, skin rash, dyspepsia, vomiting, dizziness, drowsiness, and insomnia.

REFERENCE:

[1] Parikh SV. Bipolar Disorder. In: Compendium of Therapeutic Choices. Canadian Pharmacists Association.
[2] Lamotrigine Product Monograph; https://pdf.hres.ca/dpd_pm/00064120.PDF

The correct answer is: Nausea

Question 5

ID: 50119

Correct

Flag question

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LK is a 22-year-old female who presents to the hospital with signs and symptoms of an acute episode of bipolar major depression. She has been on lithium 300 mg po once daily for the last year and her levels are within the normal range. The psychiatrist decides to add lurasidone 20 mg po daily to the patient's regimen for the acute depressive episode. After two weeks of taking the medication, LK's symptoms have improved somewhat, but not significantly. The psychiatrist asks you what to do next. Upon examination of the medication administration record, you learn that the nurses have not missed any dose administrations. The dose is given with lithium every morning an hour before breakfast for ease of administration.

Which of the following do you recommend to the psychiatrist?

Select one:

a. Increase the dose of lurasidone to 40 mg po once daily ✖

b. Discontinue lurasidone and start quetiapine ✖

c. Continue lurasidone 20 mg once daily for a total of 4 weeks, then reassess ✖

d. Switch the administration time of lurasidone to be taken with dinner ✔

Rose Wang (ID:113212) this answer is correct. Lurasidone should be given with food for improved absorption.

Correct

Marks for this submission: 1.0/1.0.

TOPIC: Bipolar Disorder

LEARNING OBJECTIVE:

Understand the optimal time to administer lurasidone.

BACKGROUND:

Lurasidone is an antipsychotic that can be used to treat acute bipolar depression. Lurasidone can be used as monotherapy, or in conjunction with lithium or valproic acid. Lurasidone acts on dopaminergic and serotonergic receptors. Lurasidone (and most other drugs used to treat acute bipolar depressive episodes) can take 2 to 4 weeks to show symptom improvement. The drug can be titrated as tolerated to manage symptoms. If at 2 to 4 weeks, the drug therapy is optimized but not showing significant improvement in symptoms, another first-line therapy can be added to the regimen, or the drug can be switched to a different first-line therapy. It is important to make sure the therapy chosen is being given correctly and has been optimized if there is a lack of significant improvement prior to changing the regimen. Lurasidone specifically should be given with a meal of at least 350 calories to increase its absorption.

RATIONALE:

Correct Answer:

- **Switch the administration time of lurasidone to be taken with dinner** - Lurasidone should be given with food for improved absorption.

Incorrect Answers:

- **Increase the dose of lurasidone to 40 mg po once daily** - The current administration of lurasidone should be optimized prior to increasing the dose.

- **Discontinue lurasidone and start quetiapine** - Lurasidone therapy should be optimized prior to switching to another drug.
- **Continue lurasidone 20 mg once daily for a total of 4 weeks, then reassess** - Lurasidone's administration can be optimized at this point in time to see the full benefit of the therapy.

TAKEAWAY/KEY POINTS:

Lurasidone should be given with meals of at least 350 calories to ensure it is being absorbed adequately.

REFERENCE:

[1] Parikh SV. Bipolar Disorder. In: Compendium of Pharmaceuticals and Specialties. Ottawa, ON: Canadian Pharmacists Association. https://myrxtx.ca.

The correct answer is: Switch the administration time of lurasidone to be taken with dinner

Question 6

ID: 50121

Incorrect

Flag question

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Which of the following statements is accurate regarding the incidence of antipsychotic adverse effects in the setting of bipolar disorder?

Select one:

a. Risperidone is associated with a high risk of extrapyramidal symptoms relative to other atypical antipsychotics ✔

b. Aripiprazole is associated with a high risk of sedation and metabolic abnormalities relative to other atypical antipsychotics ✖

c. Compared to other second-generation antipsychotics, quetiapine is associated with a high risk of hyperprolactinemia ✖

d. Compared to other second-generation antipsychotics, asenapine is associated with a high risk of insomnia and weight gain ✖

Rose Wang (ID:113212) this answer is incorrect. The incidence of insomnia and weight gain in patients taking asenapine is considered low compared to other atypical antipsychotics.

Incorrect

Marks for this submission: 0.0/1.0.

TOPIC: Bipolar Disorders

LEARNING OBJECTIVE:

To learn the relative incidence of adverse effects associated with various antipsychotics.

BACKGROUND:

Pharmacological treatments for each phase are determined by their level of evidence in treating the specified phase, as well as some other factors including but not limited to side effects, tolerability, drug interactions, and comorbid conditions. The mainstay treatments for bipolar disorder include lithium, valproic acid/divalproex, and Second Generation Antipsychotics (SGAs). Both monotherapy and combination therapy can be considered, however combination therapy is typically reserved for those with severe bipolar disorder. Combination therapy typically consists of a SGA and either lithium or divalproex. It is important to remember that those in manic or depressive states may have mixed features. In these cases, it is important to consider the recommended treatment options for the predominant episode. Second-generation antipsychotics are associated with lipid changes, blood glucose changes, weight gain, hyperprolactinemia, extrapyramidal symptoms (EPS), headaches, orthostatic hypotension, sedation or insomnia, QT prolongation, rare skin reactions, and GI side effects (e.g. constipation). Antipsychotics differ in their likelihood of causing each of these adverse effects. Of the second-generation antipsychotics used in the treatment of bipolar disorder, olanzapine and quetiapine are associated with the highest risk of weight gain. The risk of weight gain associated with risperidone, aripiprazole, lurasidone, and paliperidone is low to moderate. Asenapine and ziprasidone are associated with minimal or no weight gain. Hyperprolactinemia is most commonly associated with paliperidone and risperidone. Olanzapine and ziprasidone have a low risk of causing hyperprolactinemia. Aripiprazole, asenapine, lurasidone, and quetiapine carry a minimal risk of causing hyperprolactinemia. Olanzapine and quetiapine are associated with the highest risk of sedation among the antipsychotics used to treat bipolar disorder. Lurasidone, risperidone, and ziprasidone with a lower risk of causing sedation, while aripiprazole, asenapine, and paliperidone are associated with a minimal risk of sedation. Aripiprazole and paliperidone carry a low risk of causing insomnia. The risk of insomnia is even lower with risperidone and ziprasidone. The risk is lowest (minimal to none) with asenapine, lurasidone, olanzapine, and quetiapine. Among the second-generation antipsychotics used to treat bipolar disorder, aripiprazole, paliperidone, and risperidone are associated with a low-to-moderate risk of extrapyramidal symptoms. Asenapine, lurasidone, and ziprasidone are associated with an even lower risk of extrapyramidal symptoms. Olanzapine and quetiapine carry a minimal risk of causing extrapyramidal symptoms. Olanzapine is associated with a high risk of causing metabolic abnormalities, while quetiapine is associated with a lower risk of metabolic abnormalities. Aripiprazole, asenapine, lurasidone, paliperidone, risperidone, and ziprasidone carry a minimal risk of causing metabolic abnormalities. Existing evidence suggests that aripiprazole, asenapine, lurasidone, paliperidone, risperidone, and ziprasidone are associated with a minimal risk of causing metabolic abnormalities.

RATIONALE:

Correct Answer:

- **Risperidone** - Risperidone is associated with a high risk of extrapyramidal symptoms and hyperprolactinemia when compared to other atypical antipsychotics.

Incorrect Answers:

- **Aripiprazole** - Aripiprazole is associated with a low risk of sedation and metabolic abnormalities when compared to other atypical antipsychotics.
- **Quetiapine** - Existing evidence suggests that quetiapine is not associated with a significant risk of hyperprolactinemia.
- **Asenapine** - The incidence of insomnia and weight gain in patients taking asenapine is considered low compared to other atypical antipsychotics.

TAKEAWAY/KEY POINTS:

Among the second-generation antipsychotics used to treat bipolar disorder, aripiprazole, paliperidone, and risperidone pose the highest risk of causing extrapyramidal symptoms (EPS). Existing evidence suggests that the olanzapine and quetiapine carry the lowest risk of causing EPS.

REFERENCE:

[1] Yatham LN, Chakrabarty T, Bond DJ, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorders (ISBD) recommendations for the management of patients with bipolar disorder with mixed presentations. Bipolar Disord. 2021;23(8):767-788. doi: 10.1111/bdi.13135. [2] Milliken H. Psychoses. In: Compendium of Therapeutic Choices. Ottawa, ON: Canadian Pharmacists Association. https://myrxtx.ca.

The correct answer is: Risperidone is associated with a high risk of extrapyramidal symptoms relative to other atypical antipsychotics

Question 7

ID: 50125

Correct

Flag question

Send Feedback

RS is a 31-year-old female who has a history of bipolar disorder. She has been well-controlled on lithium for the past 3 years and would now like to try tapering off therapy prior to conceiving.

Which of the following is true?

Select one:

a. RS needs to meet with her doctor to determine her options ✔

Rose Wang (ID:113212) this answer is correct. RS needs to meet with her doctor to determine her options.

b. RS should try to taper off her medication ✖

c. RS requires lifelong treatment as Bipolar disorder is a chronic condition ✖

d. Bipolar disorder treatment can be stopped once RS is in remission ✖

Correct

Marks for this submission: 1.0/1.0.

TOPIC: Bipolar Disorders

LEARNING OBJECTIVE:

To learn about the appropriate management of bipolar disorder in women planning to conceive.

BACKGROUND:

Pharmacological treatments for each phase are determined by their level of evidence in treating the specified phase, as well as some other factors including but not limited to side effects, tolerability, drug interactions, and comorbid conditions. The mainstay treatments for bipolar disorder include lithium, valproic acid/divalproex, and Second-Generation Antipsychotics (SGAs). Combination therapy typically consists of a SGA and either lithium or divalproex. It is important to remember that those in manic or depressive states may have mixed features. In these cases, it is important to consider the recommended treatment options for the predominant episode. Women planning to conceive should meet with their doctor to discuss their options. Bipolar disorder is a chronic condition but may not require lifelong treatment.

RATIONALE:

Correct Answer:

- **RS needs to meet with her doctor to determine her options** - This is the recommended approach for women with bipolar disorder planning to conceive, ensuring personalized treatment planning based on individual health status and pregnancy plans.

Incorrect Answers:

- **RS should try to taper off her medication** - This is a decision that needs to be made by the patient and their healthcare provider. There is no set rule on this. While patient autonomy is crucial, the statement is too vague and does not address the need for medical guidance specifically tailored to managing bipolar disorder during pre-conception.
- **RS requires lifelong treatment as Bipolar disorder is a chronic condition** - Bipolar disorder is a chronic condition but it does not always require lifelong treatment. his statement is true in general but does not address specific considerations for women planning to conceive, which is critical for the scenario.
- **Bipolar disorder treatment can be stopped once RS is in remission** - This is a decision that needs to be made by the patient and their healthcare provider. There is no set rule on this. While patient autonomy is crucial, the statement is too vague and does not address the need for medical guidance specifically tailored to managing bipolar disorder during pre-conception

TAKEAWAY/KEY POINTS:

Women planning to conceive should meet with their doctor to discuss their options. Bipolar disorder is a chronic condition but may not require lifelong treatment.

REFERENCE:

[1] Yatham LN, Chakrabarty T, Bond DJ, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorders (ISBD) recommendations for the management of patients with bipolar disorder with mixed presentations. Bipolar Disord. 2021;23(8):767-788. doi: 10.1111/bdi.13135.

The correct answer is: RS needs to meet with her doctor to determine her options

Question 8

ID: 50127

Incorrect

Flag question

Send Feedback

JT is a 28-year-old male who has been experiencing symptoms such as elevated mood, increased energy, rapid speech, and a heightened sense of self-importance. His family has also noticed an increase in impulsive and risky activities. As JT has a history of a previous depressive episode, his psychiatrist diagnosed him with bipolar 1 disorder, currently experiencing an acute manic state. He is allergic to ciprofloxacin and his medications include cetirizine 10 mg PO daily for his seasonal allergies and a multivitamin. JT's psychiatrist asks for your advice on the treatment selection for his acute manic state.

According to the CANMAT 2018 guidelines, all of the following treatments have evidence to support their use as monotherapy in the acute manic state of bipolar 1 disorder, **EXCEPT**:

Select one:

- Lamotrigine ✔
- Asenapine ✖
- Haloperidol ✖

Rose Wang (ID:113212) this answer is incorrect. Haloperidol has evidence for efficacy but is recommended as second-line due to side effects.

- Divalproex ✖

Incorrect

Marks for this submission: 0.0/1.0.

TOPIC: Bipolar Disorders

LEARNING OBJECTIVE:

Identify first-line options to treat acute mania in bipolar 1 disorder.

BACKGROUND:

Bipolar 1 disorder is a mood disorder which is characterized by changes in mood, energy, and behaviour. Patients must present with at least 1 episode of mania (symptoms include elevated mood, fast speech, feelings of grandiosity etc), with or without episodes of major depression. In bipolar 1 disorder management, there are 3 distinct phases that clinicians need to treat: acute mania, acute depression, and maintenance (e.g. prevention of recurrence). Drugs used for one of these phases may not necessarily be used for another of these phases. For example, a drug that is first line for acute depression may not have any benefit in acute mania or maintenance therapy.

Below are the updated 2018 CANMAT recommendations for the management of acute mania:

First line monotherapies	First line combination therapies
• Lithium • Quetiapine • Divalproex/Valproic Acid • Asenapine • Ariprazole • Paliperidone >6mg	• Quetiapine + Li/DVP • Ariprazole + Li/DVP • Risperidone + Li/DVP

- Risperidone
- Cariprazine

- Asenapine + Li/DVP

Better evidence for efficacy and tolerability/safety

Better evidence for efficacy and tolerability/safety

Second line therapies

- Olanzapine
- Carbamazepine
- Olanzapine + Li/DVP
- Lithium + DVP
- Ziprasidone
- Haloperidol
- ECT

Better evidence for efficacy and tolerability/safety

RATIONALE:

Correct Answer:

- **Lamotrigine** - Lamotrigine is efficacious as monotherapy for bipolar depression, not mania (or manic state of bipolar disorder).

Incorrect Answers:

- **Asenapine** - Asenapine has evidence to support its use as first-line monotherapy for acute mania.
- **Haloperidol** - Haloperidol has evidence for efficacy but is recommended as second line due to side effects.
- **Divalproex** - Divalproex has evidence for use as first-line monotherapy.

TAKEAWAY/KEY POINTS:

Monotherapy options for acute mania for bipolar 1 disorder include asenapine, divalproex, and haloperidol.

REFERENCE:

[1] Yatham LN, Chakrabarty T, Bond DJ, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorders (ISBD) recommendations for the management of patients with bipolar disorder with mixed presentations. *Bipolar Disord*. 2021;23(8):767-788. doi: 10.1111/bdi.13135.

The correct answer is: Lamotrigine

Question 9

ID: 50132

Incorrect

Flag question

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THE NEXT 2 QUESTIONS INCLUSIVE REFER TO THE FOLLOWING CASE:

BB is a 33-year-old female lawyer who has recently been diagnosed with bipolar disorder type 2. She presents to the pharmacy with a new prescription for lithium 300 mg PO QHS. BB has no known allergies and does not take any medications. BB mentions that since she has never taken a chronic medication before, she has concerns about potential complications of the medication.

Which of the following is **NOT** a complication of lithium treatment?

Select one:

a. Hypothyroidism ✖

b. Cholelithiasis ✔

c. Arrhythmia ✖

d. Nephrogenic diabetes insipidus ✖

Rose Wang (ID:113212) this answer is incorrect. Nephrogenic diabetes insipidus is a potential complication of lithium treatment.

Incorrect

Marks for this submission: 0.0/1.0.

TOPIC: Lithium therapy complications

LEARNING OBJECTIVE:

Identify complications associated with lithium use.

BACKGROUND:

Lithium is a mood-stabilizing drug most often prescribed for bipolar disorder. The exact mechanism of action of lithium is currently unknown. Lithium can be used in all 3 phases of management for bipolar 1 disorder (acute mania, acute depression, maintenance therapy).
Lithium has many important drug and food interactions which can precipitate toxicities, such as changes in salt and water intake, ACE inhibitors, and diuretics.
Side effects of lithium include diabetes insipidus, cardiac arrhythmias, hypothyroidism, nausea, vertigo, muscle weakness (not an exhaustive list). These side effects should be counselled on and monitored for in all patients on lithium therapy.

RATIONALE:

Correct Answer:

- **Cholelithiasis** - Cholelithiasis is NOT a complication of lithium.

Incorrect Answers:

- **Hypothyroidism** - Hypothyroidism is a potential complication of lithium treatment.
- **Arrhythmia** - Arrhythmia is a potential complication of lithium treatment.
- **Nephrogenic diabetes insipidus** - Nephrogenic diabetes insipidus is a potential complication of lithium treatment.

TAKEAWAY/KEY POINTS:

Important complications of lithium therapy include diabetes insipidus, hypothyroidism, and arrhythmias.

REFERENCE:

[1] Lithium product monograph. http://eci2012.net/wp-content/uploads/2015/03/Lithane-PM-En-166340.01-20Feb-2015.pdf.

The correct answer is: Cholelithiasis

Question 10

ID: 50133

Correct

Flag question

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BB returns to the pharmacy a few days after starting her lithium therapy. She has been doing some research on lithium and read that lithium interacts with many medications. She is concerned as she sometimes self-treats for menstrual cramps and headaches and wonders which medications can affect her lithium levels.

All of the following medications, when introduced to a patient stabilized on lithium can increase lithium plasma levels, **EXCEPT**:

Select one:

- a. Indapamide ✗
- b. Naproxen ✗
- c. Enalapril ✗
- d. Divalproex ✓

*Rose Wang (ID:113212) this answer is correct. Divalproex is a common augmenting agent with lithium and it does **NOT** increase lithium levels.*

Correct

Marks for this submission: 1.0/1.0.

TOPIC: Bipolar Disorders

LEARNING OBJECTIVE:

Identify drugs which can increase lithium levels when co-administered with lithium.

BACKGROUND:

Lithium is a mood-stabilizing drug most often prescribed for bipolar disorder. The exact mechanism of action of lithium is currently unknown. Lithium can be used in all 3 phases of management for bipolar 1 disorder (acute mania, acute depression, maintenance therapy). Lithium has many important drug and food interactions which can precipitate toxicities, such as changes in salt and water intake, ACE inhibitors, NSAIDs, and diuretics. NSAIDs, ACE inhibitors, and diuretics can increase lithium levels by reducing its clearance from the kidneys. This, in turn, can lead to lithium toxicity. Side effects of lithium include diabetes insipidus, cardiac arrhythmias, hypothyroidism, nausea, vertigo, muscle weakness (not an exhaustive list). These side effects should be counselled on and monitored for in all patients on lithium therapy.

RATIONALE:

Correct Answer:

- **Divalproex** - Divalproex is a common augmenting agent with lithium and it does NOT increase lithium levels.

Incorrect Answers:

- **Diuretics** - Diuretics, especially thiazides, can increase lithium levels.
- **NSAIDs** - NSAIDs are known to increase lithium levels.
- **ACE-inhibitors** - ACE-inhibitors are known to increase lithium levels.

TAKEAWAY/KEY POINTS:

ACE inhibitors, diuretics, and NSAIDs can increase lithium levels when used concurrently.

REFERENCE:

[1] Lithium product monograph. http://eci2012.net/wp-content/uploads/2015/03/Lithane-PM-En-166340.01-20Feb-2015.pdf.

The correct answer is: Divalproex

Finish review